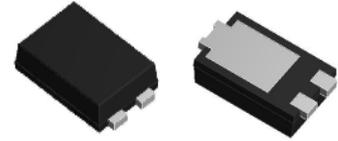
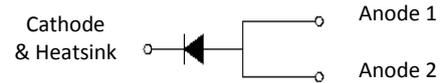


## Features

- Schottky barrier diodes
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile - typical height of 1.1 mm
- Heatsink design
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



eSGC (TO-277)



## Typical Applications

For low voltage high frequency inverters, DC/DC converters and polarity protection application.

<b>Maximum Ratings</b> (TA = 25 °C unless otherwise noted)				
Parameter	Symbol	SGC2050S	SGC2060S	Unit
Maximum repetitive peak reverse voltage	VRRM	50	60	V
Maximum RMS voltage	VRMS	35	42	V
Maximum DC blocking voltage	VDC	50	60	V
Maximum average forward rectified current	IF(AV)	20.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	300		A
Operating junction and storage temperature range	TJ, TSTG	-55 to +150		°C

<b>Electrical Characteristics</b> (TA = 25 °C unless otherwise noted)							
Parameter	Test Conditions		Symbol	Typ	Max	Unit	
Instantaneous forward voltage	I <sub>F</sub> =1A	T <sub>A</sub> =25°C	V <sub>F</sub>	0.29	-	Volts	
	I <sub>F</sub> =3A			0.34	-		
	I <sub>F</sub> =5A			0.37	-		
	I <sub>F</sub> =20A			0.54	0.70		
	I <sub>F</sub> =1A	T <sub>A</sub> =125°C		0.19	-		-
	I <sub>F</sub> =3A			0.26	-		-
	I <sub>F</sub> =5A			0.31	-		-
	I <sub>F</sub> =20A			0.53	0.65		-
Reverse current at rated DC blocking voltage	Rated VR	T <sub>A</sub> =25°C	I <sub>R</sub>	0.06	0.5	mA	
		T <sub>A</sub> =125°C		-	200		
Typical junction capacitance	4.0 V, 1 MHz		C <sub>J</sub>	0.95		nF	
Typical thermal resistance	junction to mount		R <sub>θJM</sub> <sup>1)</sup>	3		°C/W	

Note1) Thermal resistance R<sub>θJM</sub> is junction to mount, Mounted on P.C.B with 30\*30mm copper pad area

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

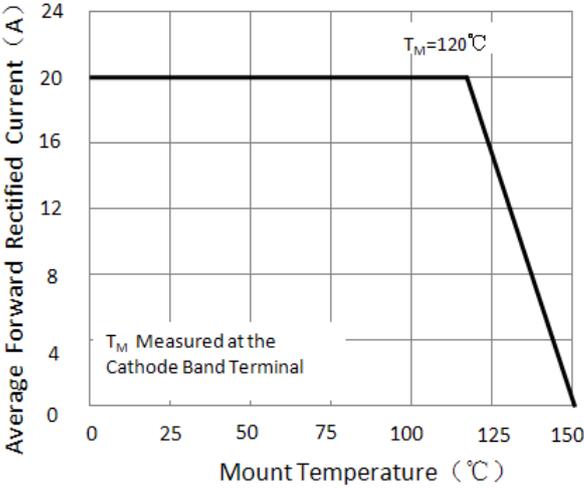


Figure 1. Forward Current Derating Curve

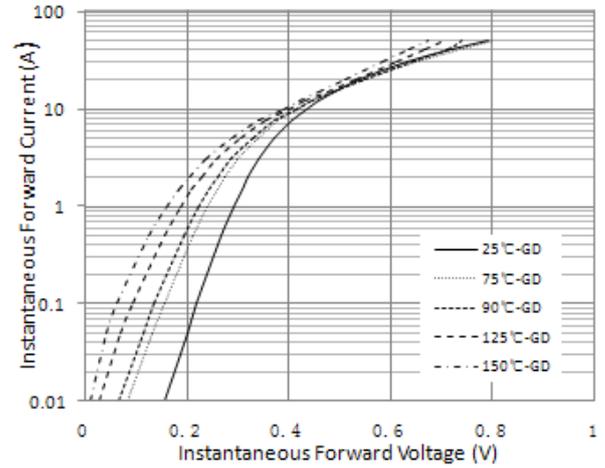


Figure 2. Typical Instantaneous Forward Characteristics

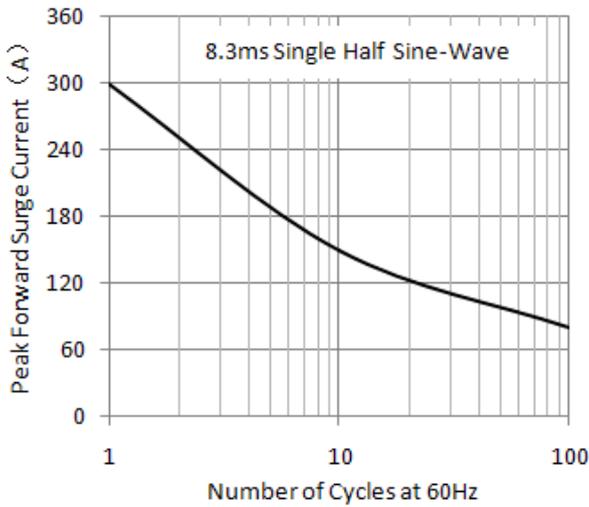


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current

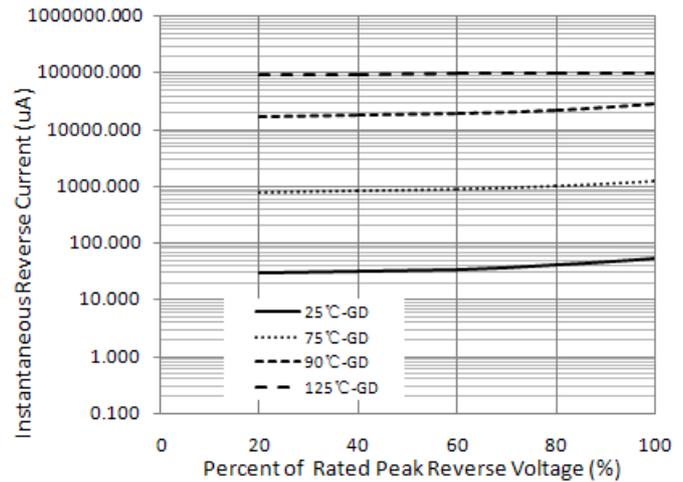
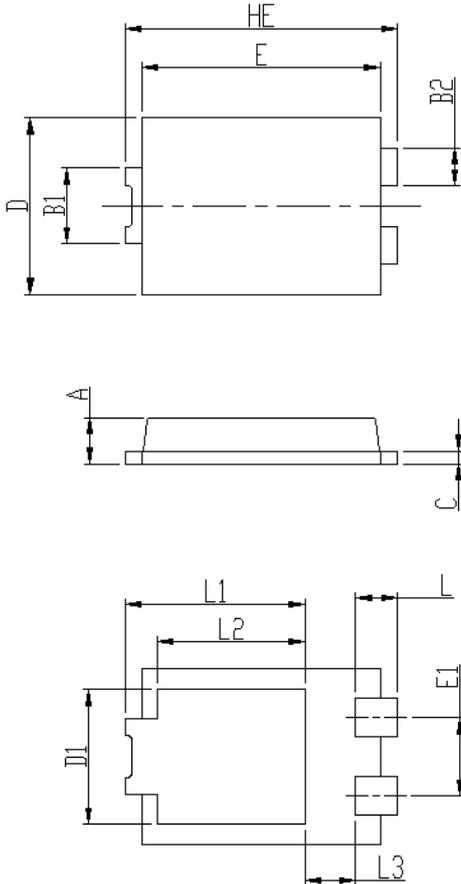


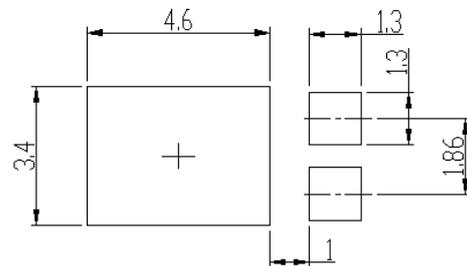
Figure 4. Typical Reverse Characteristics

## Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

Soldering footprint

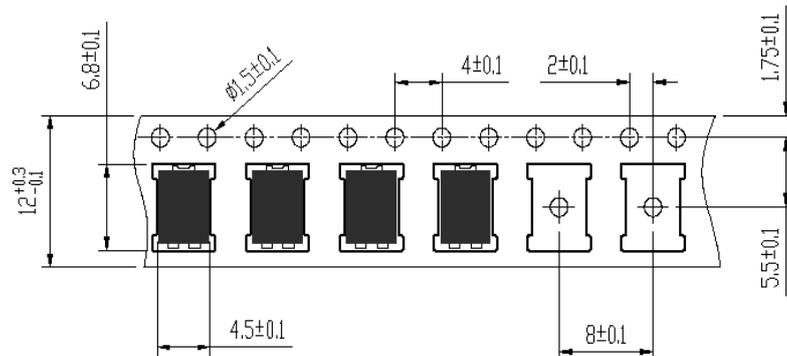


## Packing Information

### Packing quantities:

5000 pcs/Reel, 12mm Tape, 13" Reel

### Tape & Reel Specification





# **SGC2050S thru SGC2060S**

Surface Mount Schottky Rectifier  
Reverse Voltage 50~60V Forward Current 20A

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